Lake Parkway
Travel Time Analysis

Wednesday, January 14, 2009

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Introduction

- Primary features of proposed project
  - Rebuild Hoan bridge
  - Lake Parkway modification
  - Potential long-term redevelopment of Milwaukee Harbor area
- Current effort is analysis of travel time implications

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Existing Travel Time Implications – Converted Lake Parkway

- Maintain NB to WB as free flow movement
- Speed reduction (55 mph to 40 mph) adds one minute
- Congestion adds one to two additional minutes, primarily at Bay Intersection
- Total increase of two to three minutes
- ~ One six-minute bridge closure daily

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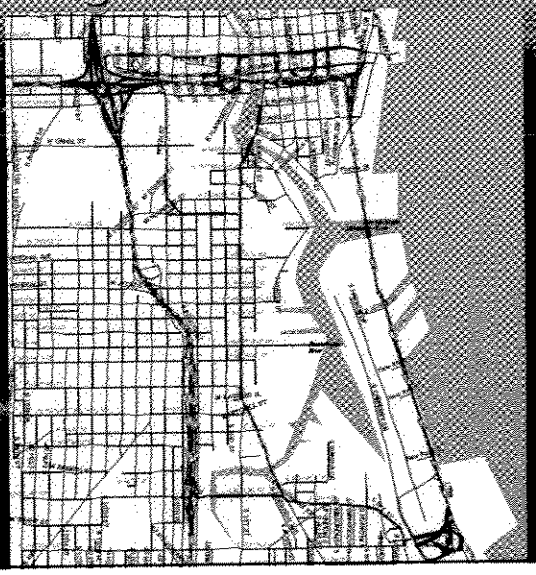
Existing Peak Hour Volumes



Existing Count

Study Corridor

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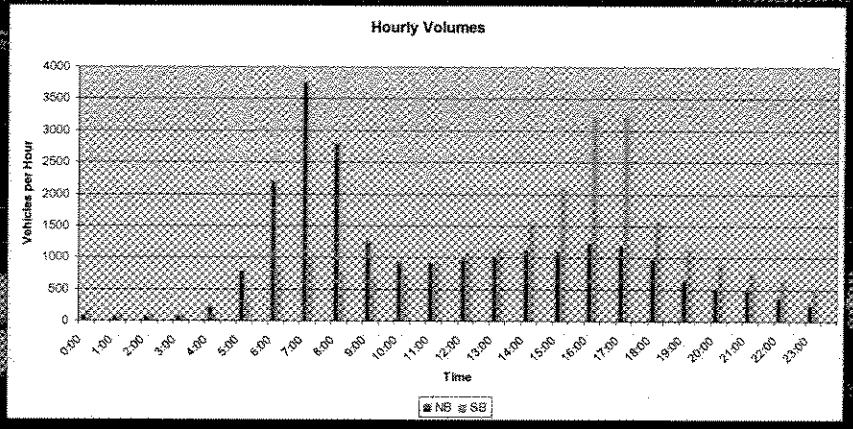
Peak Hour Volume Distribution- Lake Parkway



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Freeway Characteristics vs Arterial Characteristics

- Freeway capacity ~ 2100 vphpl
- Freeway speed ~ 55 mph
- Arterial capacity ~ 1350 vphpl
- Arterial speed ~ 40 mph
- Speed reduction equates to approximately one additional minute (free-flow conditions)

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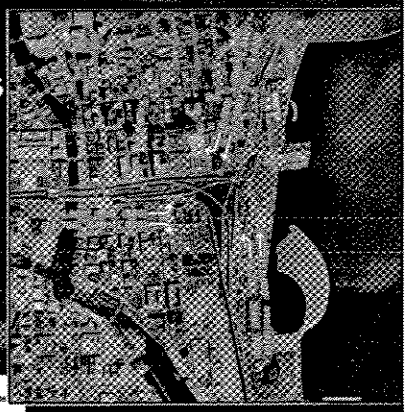
Existing Peak Hour Volumes
Lake Interchange

- High NB to WB AM lefts
- High EB to SB PM rights
- Suggest maintaining location's existing configuration



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Existing Peak Hour Volumes
Bay Street/Carferry Interchange

- High NB AM volumes
- High SB PM volumes
- Three lane intersection with turn lanes could accommodate

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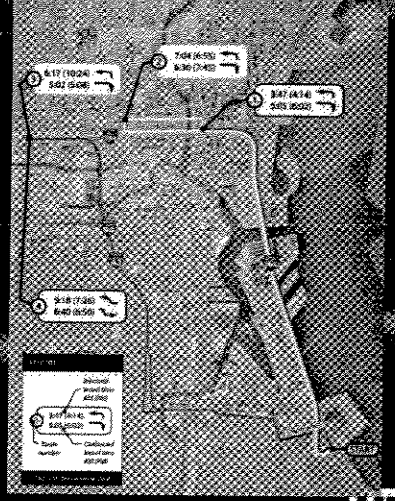
Existing Conditions- Travel Time Runs

- Travel Time O-D
  - Origin: South Lincoln Memorial and Carferry Dr
  - Inbound routes:
    1. To Clybourn St and Milwaukee St intersection via Lake Parkway
    2. To 6th St and Michigan St via Lake Parkway
    3. To I-794 merge under 16th St via Lake Parkway
    4. To I-794 merge under 16th St via I-94
  - Outbound routes: Reverse direction



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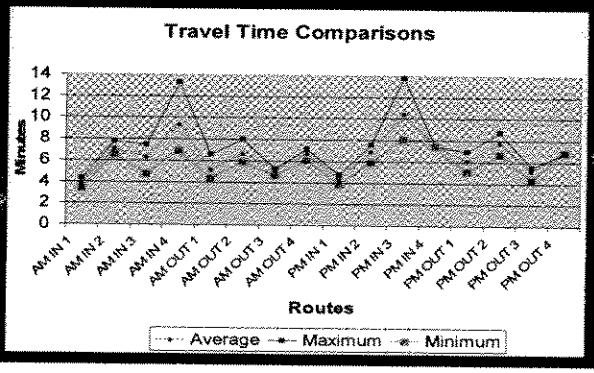
Existing Conditions- Travel Time Runs

- Travel Time Run Summary
  - Delay at the Marquette Interchange



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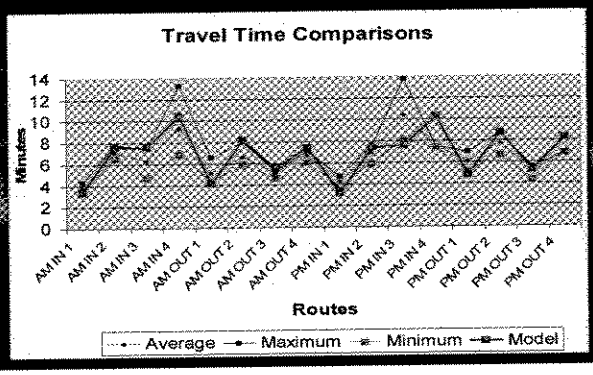
Travel Time Estimation Tool

- Uses roadway capacity and traffic volumes to estimate speeds and travel times
- Calibrated based on travel time runs



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Existing Travel Time Implications
Converted Lake Parkway

- Reduction from freeway to arterial adds one to two minutes during peaks
- Most delay associated with intersection of Lake Parkway and Bay/Carferry

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Port Activity

Ship Activity	Month	
	July, 2008	November, 2008
Number of Ship Trips (>30')	31	31
Average Duration	4 minutes 15 seconds	3 minutes 55 seconds
Maximum Duration	9 minutes 35 seconds	7 minutes 30 seconds
Number in AM Period	1	5
Number in PM Period	4	1

- 75% of ships pass within 5 minutes
- Assume additional 45-60 seconds each to open and close
- Approximately one six-minute closure daily

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Year 2030 Considerations

- Background traffic growth
- Peak & route diversion
- Congestion of parallel facilities
- Potential development along Lake Parkway

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Year 2030 Growth Estimation

- Utilized Historic Counts and MQIC EA
- ~1.6% along Lake Parkway
- ~1.1% along I 94
- ~1.2% along I 794
- Further refining to use SEWRPC model

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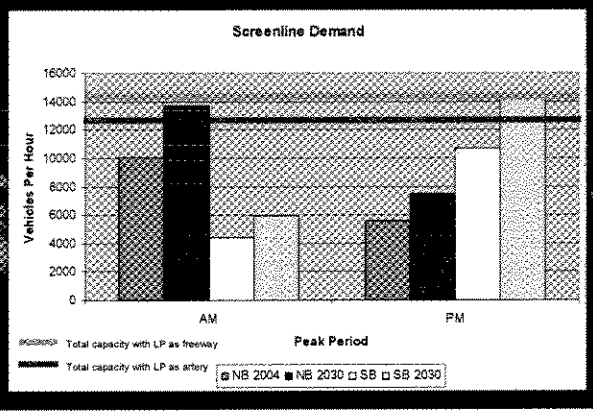
Traffic Demand Growth
2004 to 2030

- Comparison of peak volume and capacity including T 94, 1st Street and Lake Parkway



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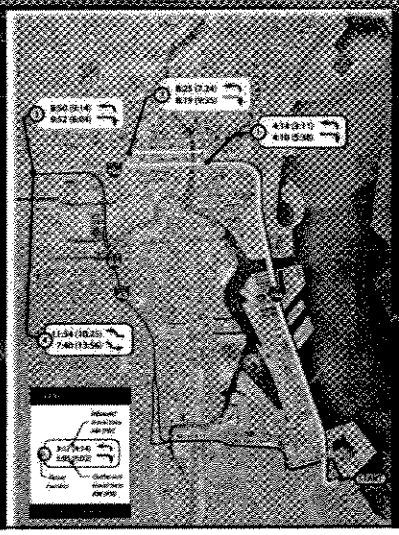
Travel Time Run- Base and Year 2030 Assuming No Build

- Additional travel time along Lake Parkway due to background growth
- I 94 travel times show increase due to congestion



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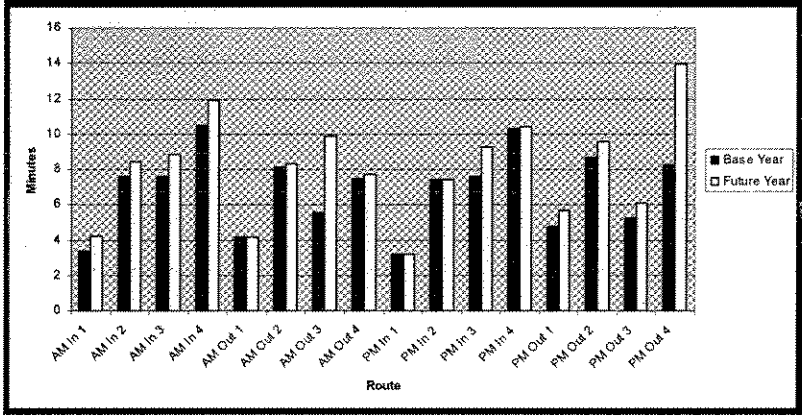
Travel Time Run- Base and Year 2030 Assuming No Build

- Lake Parkway freeway travel times increase 1 to 2 minutes by Year 2030



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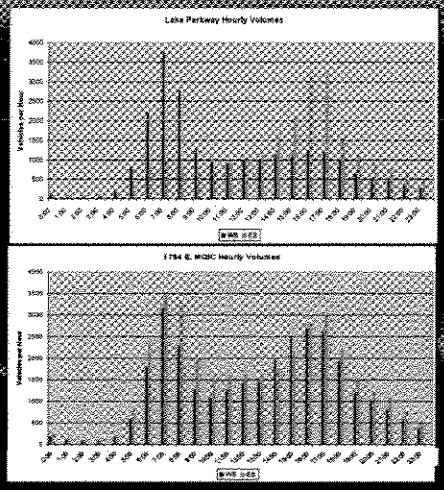
Peak Spreading

- Occurs with increase in traffic volume
- Sharp peak with low volumes
- Peaks less pronounced as traffic volumes increase



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Lake Parkway Arterial
Traffic Volume Estimation

- Base year peak hour characteristics along Lake Parkway
  - EB AM peak volume/daily volume~ 14.8 %
  - WB PM peak volume/daily volume~ 18.6 %
- Peak spreading data available along I-794 and I-43/I-94
  - Ranged from 8.6% to 10.3%
- Lake Parkway Year 2030 daily volumes
  - ~ 67,000 vpd
- Current peak volumes along Lake Parkway equate to ~11% of Year 2030 daily volumes, comparable to peak factors of other area facilities

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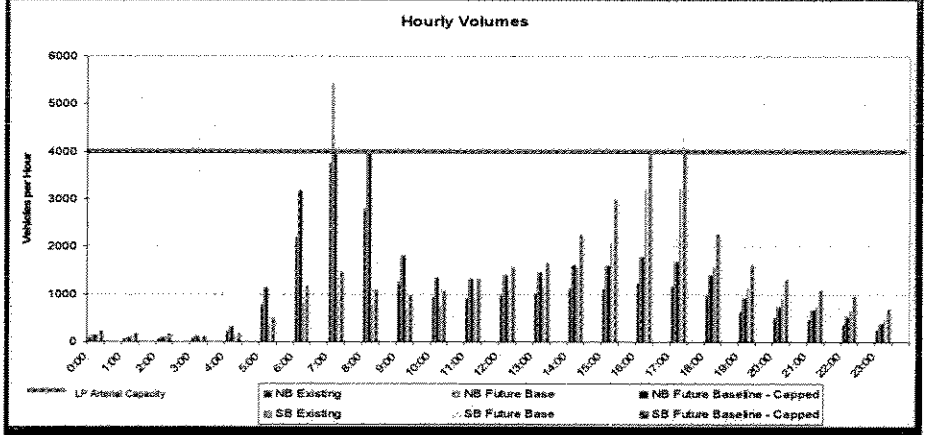
Future Baseline Hourly Projections



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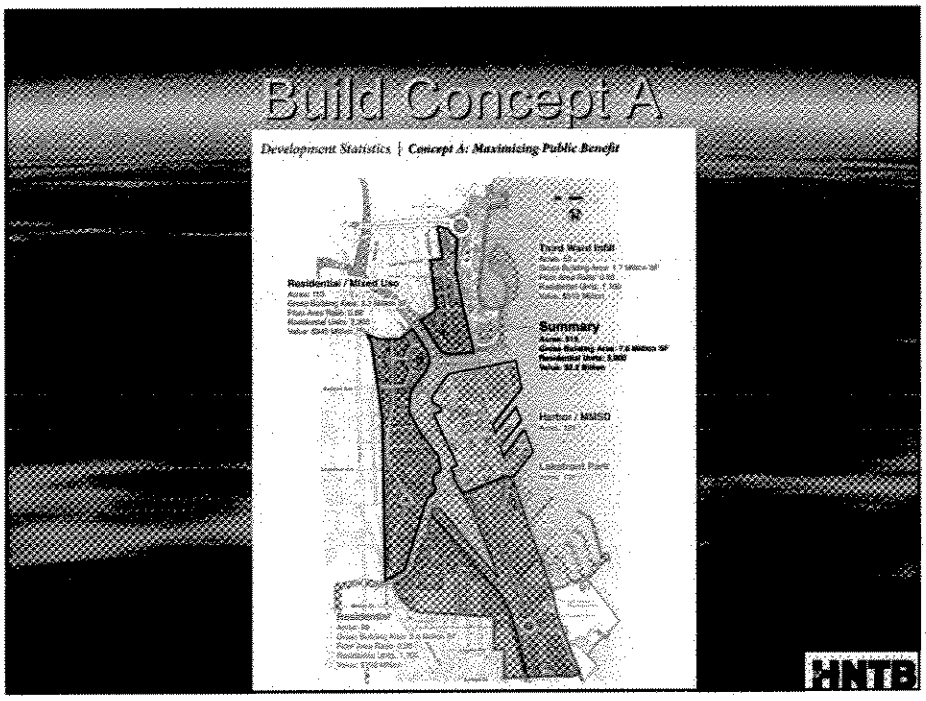
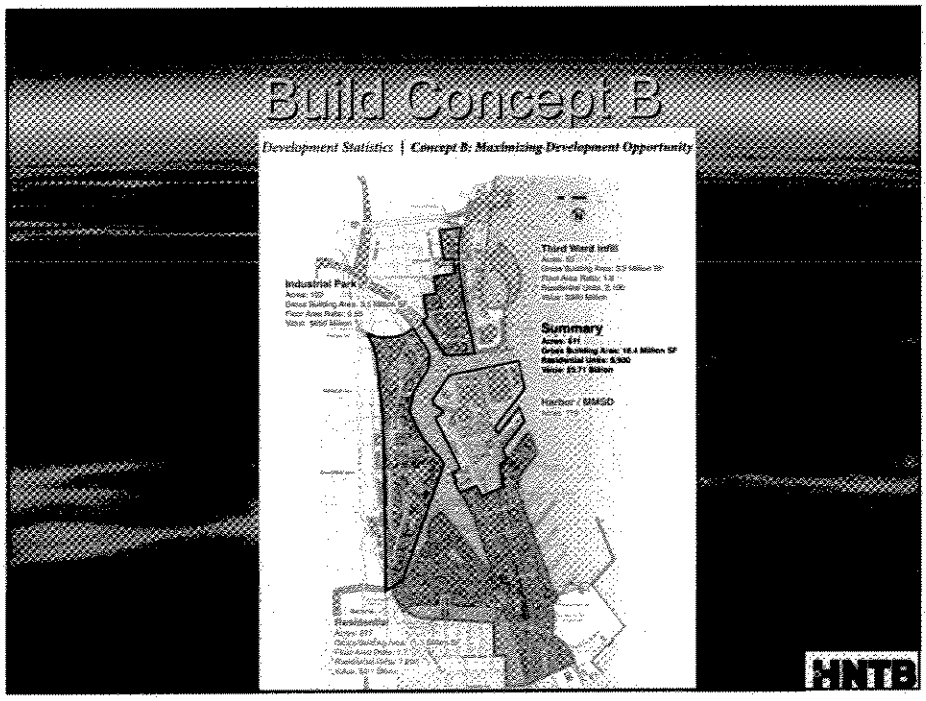
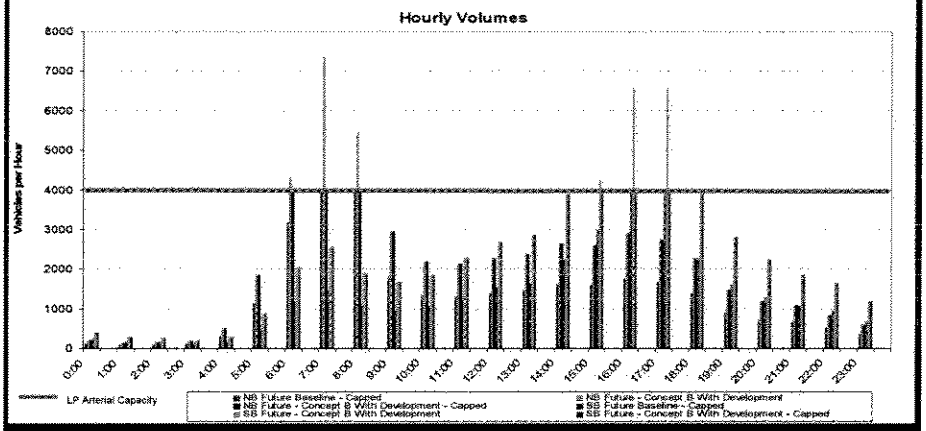
Build Concept A



Build Concept B



Future Development Hourly Projections



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Other Factors

- Trip distribution and routing changes with traffic growth (?)
  - Travel Demand Models
- Transit facilities (?)
  - Transit Modeling

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Next Steps

- Review future traffic projections to consider:
  - Peak spreading
  - Route diversion
  - Capacity of parallel facilities
  - Transit impacts
  - Local versus regional traffic growth
- Further assess capacity for redevelopment

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Recommendations Recap – Converted Lake Parkway

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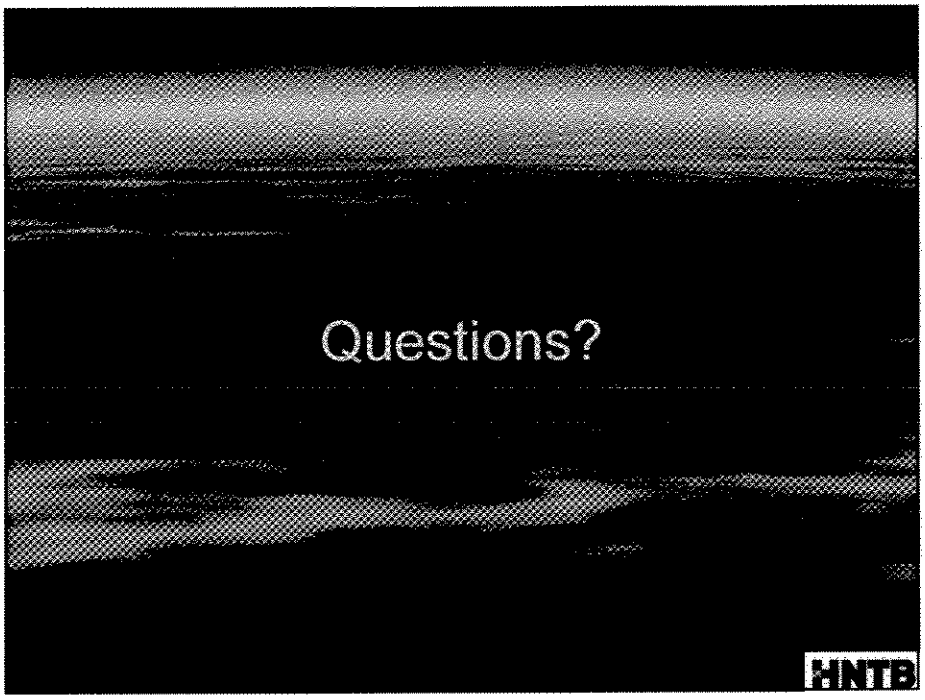
Questions?
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